REMARKS

In the 35 U.S.C. §103 rejection in the Office Action, Kato is cited for the disclosure of an electrochemical energy storage device comprising at least two electrodes, an electrolyte, and a porous carrier material (expanded PTFE) for the electrolyte having an inner pore structure in which a perfluorinated surface-active substance is present. As noted in the Action, it is the ionic exchange resin that is the perfluorinated carbon-based ionic exchange resin which is filled in the pores in Kato.

However, in column 4, lines 33 – 38 and claim 1 of Kato it is stated that the invention provides for a solid polymer ion exchange membrane assembly, with the membrane comprising at least one membrane support of porous expanded polytetrafluoroethylene which is filled and made non-porous with solid polymer ion exchange resin.

In contrast page 2, lines 22-29 of the PCT publication of the present application provide for a porous material whose inner pore structure is coated at least partly with the perfluorinated surface-active substances. Since the presence of the surface-active substance is realized in the form of a layer, excellent ion flow can be maintained in the electrolyte by the pore structure, as compared to the pores being filled with perfluorinated surface-active substance. In addition, providing a layer on the inner surface of the pore structure does not reduce the receiving capacity of the carrier material for the first electrolyte.

Kato on the other hand teaches solid polymer ion exchange membranes. The ions are transported by means of an ion exchange mechanism and not by ion flow. All pores must be filled in Kato to achieve a high ion exchange capacity.

So in the present invention the porous material of the carrier remains porous, despite the presence of the perfluorinated surface-active substances. The substances only coat the surface of the pores and do not fill up the pores to render the material non-porous, as is the case in Kato. By creating a pre-coated surface on a part of the pores it is possible to use all kinds of known electrolytes, including different types of acids, bases and salts (see page 15 of the PCT application, last column – page 16, second

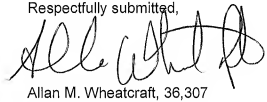
column) in the electrochemical energy storage device of the invention. Hence, the device can be used in many applications and is not limited to the use of ion exchange polymers.

Kato is combined with Branca, which teaches a particular type of PTFE. Neither reference, nor their combination, teaches coating the inner surface of the porous carrier material with perfluorinated surface-active substance which allows for penetration of a separate electrolyte into the pores of the carrier material.

For the same reasons, the obviousness-type double patenting rejection is traversed. Claim 15 of US Patent 6, 613,203 (Hobson) is based on claim 1, which states inter alia that the ion exchange material substantially impregnates the membrane so as to render an interior volume of the membrane substantially occlusive. In column 3, lines 45 – 50 explain the term "substantially occlusive" to mean that the interior volume is filled with ion exchange material to such an extent that 90% or more of the interior volume of the membrane is filled. Therefore, the membrane disclosed here is no longer porous and hence no longer free to take up a separate electrolyte.

Reconsideration is respectfully requested.

Respectfully submitted,



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